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NOTES ON GEOGRAPHIC DISTRIBUTION

Novelties in Orchidaceae from the Brazilian Amazon

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ABSTRACT: Three new records of Orchidaceae in the Brazilian Amazon are presented: *Duckeella pauciflora* Garay, *Notylia angustifolia* Cogn. and *Specklinia aristata* (Hook.) Pridgeon and Chase, and the occurrence of *Trichocentrum recurvum* Lindl. is confirmed.

The Amazon Basin is the largest forest area in the world and most portions remain under-collected (Hopkins 2007), specially because of the difficulties in field work within this large area, such as lack of transport infrastructure. Orchidaceae are one of the largest families of plants with about 24.500 species (Dressler, 2005) and 725 genera (Dressler, 1993), it is represented by 764 species within the Brazilian portion of the Amazon region (Barros *et al.* 2013). However, Silva and Silva (2000) pointed out that additional collection efforts along the border with the Guyanas and Venezuela (Guayana Shield), the upper courses of rivers, and the central inaccessible areas could result in an increase to the already rich orchid flora.

The aim of this study is to present some new occurrences of Orchidaceae for the Brazilian Amazon. The plants studied here have been previously reported from the Venezuelan portion of the Guayana Shield, close to the border with Brazil. The species are described, illustrated, and their taxonomic affinities are discussed. The samples were deposited at INPA and UFP herbaria.

1. ***Duckeella pauciflora*** Garay, Bot. Mus. Leafl. 18: 186. 1958. Figures 1A-2

Terrestrial herbs; rhizome reduced. Leaves 2-4, linear-lanceolate, apex acute. Inflorescence a raceme, ca. 30 cm long, terminal, 2-4-flowered, erect. Flowers yellowish; sepals sub-similar oblong-oblanceolate, apex acute; petals ovate-rhombic, apex obtuse; lip trilobate, lateral lobes basal, shortly oblong, apex rounded, central lobe oblong-oblanceolate, apex acute, callus 1 at the base, minutely fimbriate, orange. Column 0.65-0.7 cm long, pollinia 2. Ovary + pedicel 1.0-1.2 cm long.

Duckeella Porto and Brade is a small genus with three species (Chase *et al.* 2003), from which *D. adolphii* Porto and Brade and *D. alticola* C. Schweinf. are cited for Brazil by Barros *et al.* (2013). *D. pauciflora* were previously found in Venezuela and Colombia (Govaerts 2003), and here the first record for Brazil is provided. It is morphologically similar to *D. adolphii*, but differs by having broader petals and lip with acute apex. This terrestrial orchid is not frequent in the area of collection, and can be found in open areas, on sandy soils of Amazonian "*campinas*" vegetation.

Material examined: BRAZIL. Roraima: Caracaraí, Parque Nacional do Viruá, 27.III.2011, fl., T. D. Monge 1424 (INPA).

2. ***Notylia angustifolia*** Cogn., Symb. Antill. 6: 618. 1910. Figures 1B-2

Epiphytic herbs; pseudobulb heteroblastic, ellipsoid. Leaves 3, one on the apex and two basal, oblong to elliptic, apex tridenticulate. Inflorescence a raceme, 5-6.5 cm long, lateral, pendulous, 18-22-flowered. Flowers greenish-white; dorsal sepals elliptic, apex acute; lateral sepals narrow elliptic, fused at the base to the middle, apex acute; petals elliptic, subfalcate, whitish with 2-3 orange spots, apex acute; lip unguiculate, deltoid, apex acute. Column 0.2-0.3 cm long, pollinia 2. Ovary + pedicel 0.3-0.4 cm long.

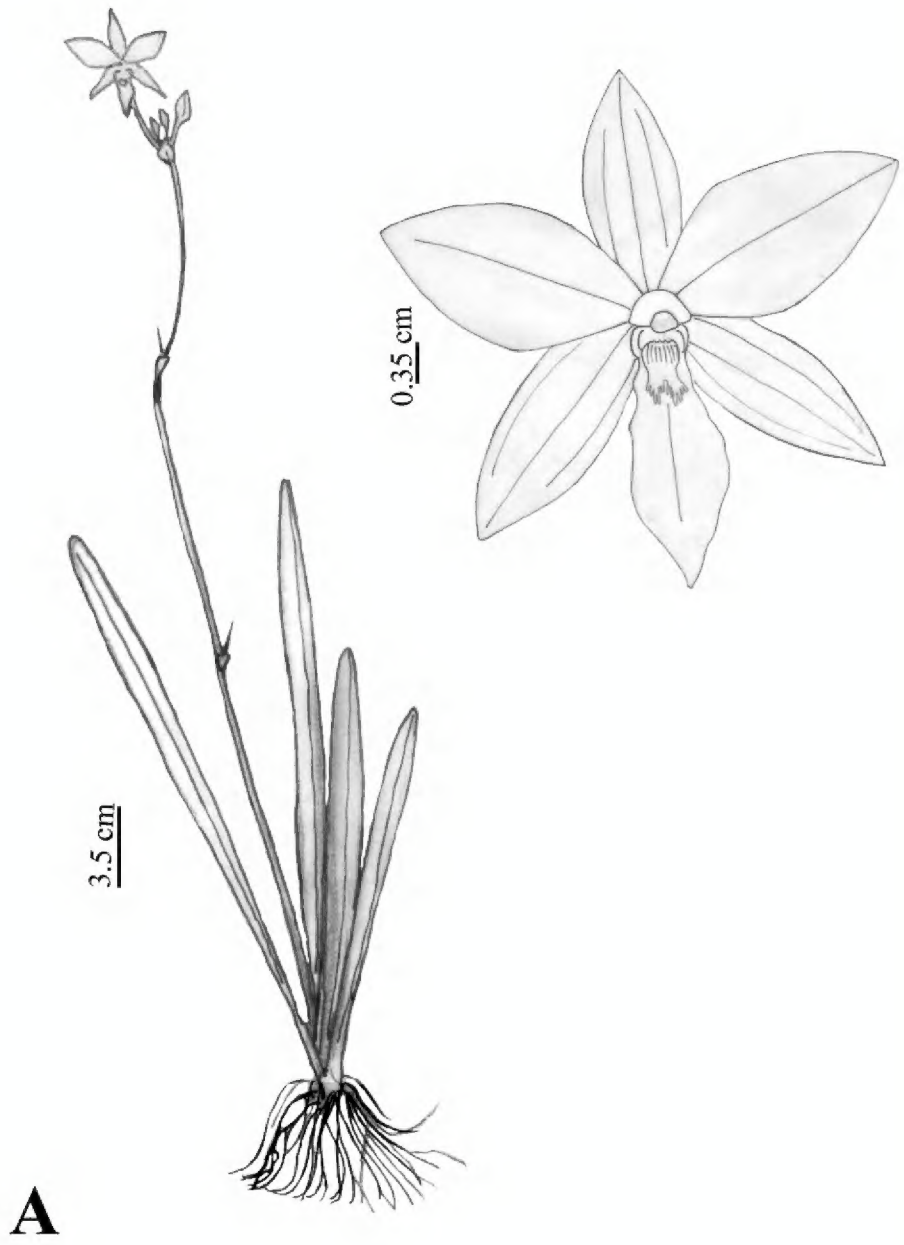
The Neotropical genus *Notylia* Lindl. has ca. 60 species (Chase *et al.* 2003) with 24 species found in Brazil by Barros *et al.* (2013). *Notylia angustifolia* occurs in Trinidad and Tobago, French Guyana and Venezuela (Govaerts 2003). This is the first record for Brazil. Due to its small size, *N. angustifolia* can be confused with *N. longispicata* Hoehne and Schltr. but it differs by a having shorter inflorescence (5-6,5 cm long), greenish-white flowers, whereas the flowers are yellowish in *N. longispicata,* and lip acute, it is truncate in the second species. It is common in the sub-canopy of the Viruá National Park, especially in flooded forest.

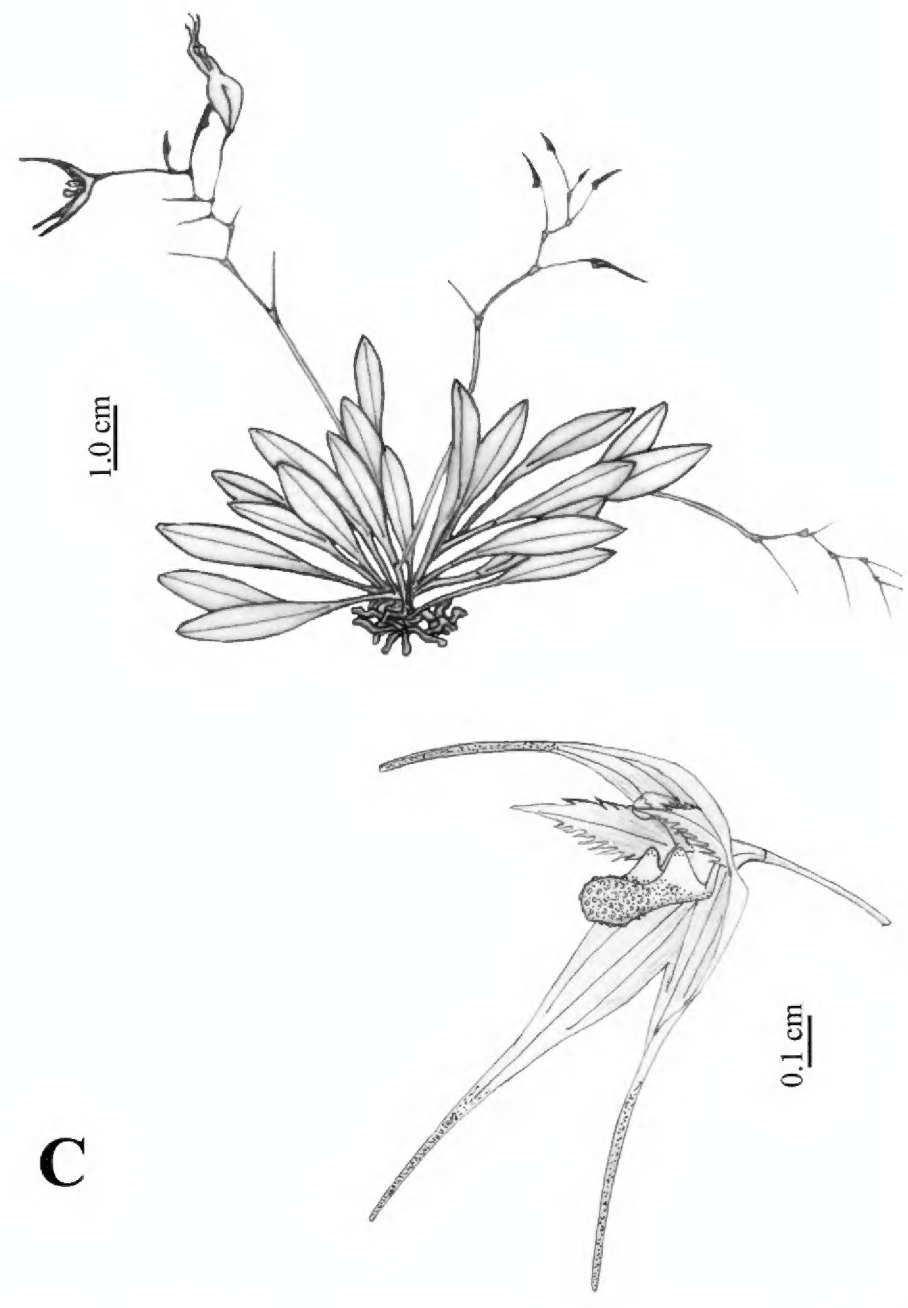
Material examined: BRAZIL. Roraima: Caracaraí, Parque Nacional do Viruá, 19.IX.2011, fl., E. Pessoa et al. 672 (UFP); 30.XI.2011, fl., E. Pessoa et al. 864 (INPA); 19.X.2011, fl., E. Pessoa et al. 773 (INPA).

3. ***Specklinia aristata*** (Hook.) Pridgeon and Chase, Lindleyana 16: 256. 2001. Figures 1C-2

Basyonim: *Pleurothallis aristata* Hook., Ann. Nat. Hist. 2: 329 1839.

Epiphytic herbs, cauloma cylindric. Leaf 1, apical, spatulate to oblanceolate, apex minutely tridenticulate. Inflorescence a fractiflex raceme, 3.7-6.5 cm long, terminal, 2-11-flowered, erect. Flowers yellowish-purple, dorsal sepal lanceolate, long-caudate; lateral sepals lanceolate, connate at the base, long-caudate; petals elliptic-lanceolate, margin fimbriate, apex acuminate; lip trilobate, purplish, papillose, basal appendages 2. Column ca. 0.15





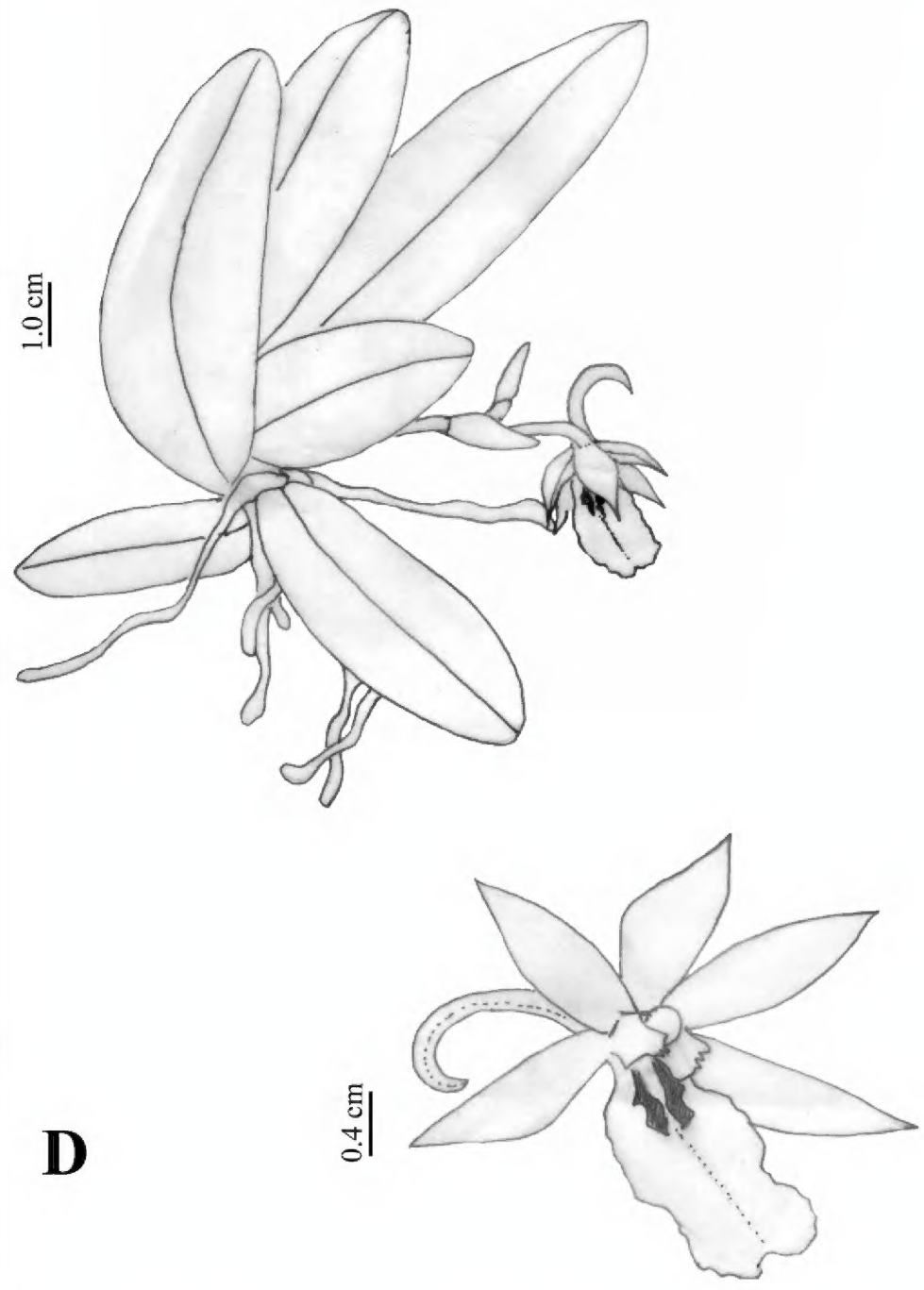


Figure 1. A. *Duckeella pauciflora*, habit and flower in detail. B. *Notylia angustifolia*, habit and flower in detail. C. *Specklinia aristata*, habit and flower in detail. D. *Trichocentrum recurvum* habit and flower in detail.

cm long, pollinia 2. Ovary + pedicel ca. 0.1 cm long.

Specklinia Lindl. has ca. 200 species (Pridgeon *et al.* 2006), seven of which are cited by Barros *et al.* (2013) for the Brazilian Amazon. *Specklinia aristata* is morphologically related to species placed by Luer (2006) in the genus *Muscarella*. It can be easily differentiated from *S. samacensis* (Ames) Pridgeon and Chase and *S. semperflorens* (Lindl.) Pridgeon and Chase by the long-caudate sepals. It is found from Central America to northwestern South America (Govaerts 2003), and the material cited here is a new record for Brazil, growing in Montane Ombrophilous Forest (1200 m elev.), close to the border with Venezuela.

Material examined: BRAZIL. Amazonas: Santa Isabel do Rio Negro, Parque Nacional do Pico da Neblina, 28.XII.2004, fl., F. A. Carvalho et al. 258 (INPA).

4. ***Trichocentrum recurvum*** Lindl., Edwards's Bot. Reg. 29 (Misc.): 9. 1843. Figures 1D-2

Epiphytic herbs; pseudobulb heteroblastic, reduced, globose to cylindrical. Leaf 1, apical, elliptic to oblong-elliptic, apex acute. Inflorescence a raceme, 1.8-2 cm long, lateral, pendulous, 1-2-flowered. Flowers whitish, dorsal sepal elliptic to oblanceolate-elliptic, apex acuminate; lateral sepals elliptic-falcate, apex acute; petals elliptic to oblong-elliptic, apex obtuse; lip obovate-pandurate, apex retuse, callus consisting of two keels at the base, purplish, spur curved. Column ca. 0.5 cm long, pollinia 2. Ovary + pedicel 1.0-1.2 cm long.

Figure 2. Geographic distribution of the studied species in Brazil. ● - *Duckeella pauciflora*, ■ - *Notylia angustifólia*, ○ - *Specklinia aristata*, □ - *Trichocentrum recurvum*.

Trichocentrum Poepp. and Endl. is a Neotropical genus with controversial circumscription (Pupulin 1995). Four species of *Trichocentrum s.s.* (excluding *Cohniella* Pfitzer, *Lophiaris* Raf. and *Lophiarella* Szlach., Mytnik and Romowicz) are cited to Brazil - *T. albococcineum* Linden, *T. fuscum* Lindl., *T. tenuiflorum* Lindl. and *T. wagneri* Pupulin (Barros *et al.* 2013). Despite *T. recurvum* having been cited as probably occurring in Brazil by Cogniaux (1904-1906), its presence had not been confirmed by Pabst and Dungs (1977) and Barros *et al.* (2013), among other authors. However, few specimens were recently found in the northern part of the Brazilian Amazon in "*Terra-Firme*" forest.

Material examined: Brazil. Pará: São Félix do Xingu, 06.VIII,1994, fl. J.B.F. Silva 354 (MG); Roraima: Caracaraí, Parque Nacional do Viruá, 18.IX.2011, fl., E. Pessoa *et al.* 655 (UFP, INPA).

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